

Application Number 10/602,384
Response to Office Action mailed April 7, 2008

REMARKS

This paper is responsive to the Office Action dated April 7, 2008. Claims 1-7, 14-22 and 24 are pending. Reconsideration of the application in light of the following remarks is respectfully requested.

In the Office Action, the Examiner rejected claims 1-7, 18-22 and 24 under 35 U.S.C. 103(a) as being unpatentable over Nomura et al. (U.S. 6,706,533). Applicants respectfully traverse the rejection. The applied references fail to disclose or suggest the inventions defined by Applicants' claims, and provide no teaching that would have suggested the desirability of modification to arrive at the claimed invention.

To establish a prima facie case of obviousness, the prior art reference (or references when combined) must teach or suggest all the claim limitations (See MPEP 706.02(j)). Applicants respectfully submit that the Office Action has failed to meet at least this basic criteria, and that Nomura does not teach or suggest all of the limitations recited in Applicants' claims as required to establish a prima facie case of obviousness under 35 U.S.C. §103.

Claim 1 recites a memory that stores a plurality of predetermined algorithms, each associated with a different one of a plurality of product classifications, and a controller that calculates a concentration of a product in the selected use solution based on the resistivity, the temperature and a predetermined algorithm associated with a product classification of the product in the selected use solution.

Nomura concerns the estimation of the concentration of an agent in a solution through use of an equation. The equation includes constants which are obtained by measuring the electrical conductivity of solutions having known concentrations of the desired agent at a plurality of temperatures and applying the least squares method to the result (see, e.g., Nomura at col. 4, lines 11-18; col. 9 line 65 to col. 11, line 30). Importantly, each agent has its own associated set of constants (see, e.g., Nomura at col. 8, lines 65-67). In other words, Nomura merely describes determining a set of constants for each agent to be measured. The agents are not grouped into product classifications, nor are each of a plurality of predetermined algorithms associated with a different one of a plurality of product classifications. Nor is the concentration of an agent determined based on one of the plurality of the predetermined algorithms associated with a product classification.

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As a result, Nomura does not teach or suggest either a memory that stores a plurality of predetermined algorithms, each associated with a different one of a plurality of product classifications or a controller that calculates a concentration of a product in the selected use solution based on the resistivity, the temperature and one of the plurality of the predetermined algorithms associated with a product classification of the product in the selected use solution as recited in Applicants' claim 1.

Nevertheless, the Office Action asserts that the mere fact that Nomura includes a controller renders it predictable that the memory "could" store a plurality of different predetermined algorithms associated with different product agents, and that it would have been within the ambit of a person of ordinary skill in the art to store a plurality of algorithms for different product agents within a memory feature to facilitate effective product monitoring for each of the product agents. The Office Action concludes by stating that "it would have been obvious to a person of ordinary skill in the art to incorporate a memory feature storing a plurality of different predetermined algorithms associated with different product agents or classifications in order to effectively use the disclosed monitoring apparatus in monitoring different product agents."¹

Applicants respectfully disagree. The Examiner incorrectly compares the "agents" described by Nomura with Applicants' claimed "product classifications." As stated in Applicants' specification:²

Each product or class of products, a product class, has different formulary chemistry and may have different conductivity curve, especially when measured from very low to very high product concentrations. Using detergent as an example, more caustic products, or product classes, tend to have higher conductivity relative to less caustic detergents.

Applicants' specification goes on to state:³

[A] user of concentration monitor 18 could select an algorithm, or lookup table, from memory 30 from eight settings based on product classification. The desired equation or lookup table would be used to determine the concentration of use solution 20 and, hence, control the addition of concentrate to use solution 20.

As an example for use solutions based on detergents, one controller algorithm could be used for a class of extruded products having naturally relatively low conductivity. Another setting could be used for very high concentrations of highly conductive liquid or solid caustic for applications found, for example, in food and beverage and vehicle care use situations.

¹ Office Action at pages 4-5.

² Applicant's specification at page 6, paragraph [0031].

³ Applicant's specification at page 10, paragraphs [0048] and [0049].

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Thus, Applicants' claims make an additional distinction not taught or suggested in Nomura between the product in the selected use solution and the product classification of the product (or "agent" in the terminology used by Nomura). Namely, as recited in claim 1, the product (or "agent") has a particular product classification, which in turn is associated with one of the plurality of predetermined algorithms. In other words, rather than calculating the concentration based on a predetermined algorithm associated with each product (or "agent"), claim 1 recites that the controller calculates a concentration of a product in the selected use solution based one of the plurality of predetermined algorithms *associated with a product classification of the product* in the selected use solution.

Nowhere does Nomura teach or suggest that agents may have product classifications, or that the agent concentration may be determined based on based one of a plurality of predetermined algorithms associated with a product classification of the product ("agent") as recited in claim 1. At most, Nomura merely describes determining a set of constants for each agent to be measured. However, this teaching in no way implies or suggests that agents may further have a product classification, and that each product classification in turn is associated with one of a plurality of predetermined algorithms used to determine the product concentration.

Claims 2-7, 18-22 and 24 are dependent upon claim 1 and include all of the limitations thereof. Claims 2-7, 18-22 and 24 are therefore patentable for at least the same reasons discussed above with respect to independent claim 1.

For at least these reasons, the Examiner has failed to establish a prima facie case of non-patentability of Applicants' claims 1-7, 18-22, 24 and 25 under 35 U.S.C. §103(a). Withdrawal of this rejection is therefore respectfully requested.

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CONCLUSION

All claims in this application are in condition for allowance. Applicants respectfully request reconsideration and allowance of all pending claims. Please charge any additional fees or credit any overpayment to deposit account number 50-1778. The Examiner is invited to telephone the below-signed attorney to discuss this application.

Date:

July 7, 2008

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